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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,388	11/19/2003	Asao Matsushima	KON-1835	7530

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EXAMINER

NOTE, JANIS L

ART UNIT PAPER NUMBER

1756

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,388

Applicant(s)

MATSUSHIMA ET AL.

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4 is/are rejected.
- 7) ☒ Claim(s) 3 and 5-8 is/are objected to.
- 8) ☒ Claim(s) 1-12 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/27/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-8, drawn to toners, classified in class 430, subclass 110.4.

II. Claims 9 and 10 (IIa) and claims 11 and 12 (IIb), drawn to image forming methods, classified in class 430, subclasses 124 and 45, respectively.

2. The inventions are distinct, each from the other because of the following reasons:

Invention I and inventions IIa and IIb are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown:

(1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process, such as a process comprising the steps of:

(1) developing an electrostatic latent image formed on an image bearing member with the toner of Invention I; and (2) fixing the toner image onto the surface of the image bearing body. Such a method does not require transferring the toner image from the

latent image bearing member as required in the methods of Inventions IIa and IIb.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, and as shown by their different classification, restriction for examination purposes as indicated is proper.

3. If applicants elect the invention of Group II, claims 9-12, they must also respond to the following election of species requirement regarding those claims.

This application contains claims directed to the following patentably distinct species of the claimed invention:

IIa. Claims 9 and 10, drawn to image forming methods classified in class 430, subclass 124.

IIb. Claims 11 and 12, drawn to image forming methods for forming multiple images of different colors on an image supporting material, classified in class 430, subclass 45.

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there are no generic claims.

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Applicants are advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicants traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. During a telephone conversation with Mr. Donald Lucas (Reg. No. 31,275) on Nov. 19, 2004, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-12 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

In Fig. 1, the reference characters 24, 5Y, 5M, 5C, and 5K. See pages 44-49 of the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR

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1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The disclosure is objected to because of the following informalities:

(1) The specification at page 46, line 9, identifies the page document in Fig. 1 with the character d. However, Fig. 1 comprises the page document D.

(2) The specification at page 48, line 13, identifies the "pair of ejection rollers" with the character 17. However, the specification at page 45, line 21, and at page 48, lines 12-13, previously identified the fixing device in Fig. 1 with character 17.

(3) The use of trademarks, e.g., Henschel mixer [sic: HENSCHEL MIXER] at page 18, lines 5 and 9, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

8. The examiner notes that the instant specification at page 14, lines 18-20, defines the term "colored particles" recited in the instant claims as "toner particles which have not been mixed with external additives.)

9. In view of the disclosure in the instant specification, the "external additive particles" in the limitation, "sum of the colored particles and external additive particles having particle diameter of at most $2.5\ \mu\text{m}$ " (emphasis added) of 0.1 - 10 percent by volume based on the sum of colored particles and the external additive particles, recited in the instant claims has been interpreted by the examiner to refer to external additive particles that are not attached to the colored particles. Antecedent basis for the examiner's interpretation is found at page 15, lines 1-9, of the specification. The specification at page 15, discloses that "toner comprising

external additives is sieved employing a 400-mesh sieve. The difference in the amount of external additives between prior to and after sieving is determined in terms of percent by weight. The resulting difference is converted to a percentage by volume based on specific gravity, which is designated as (B)."

The recitation "percent by volume based on the sum the colored particles and the external additive particles" in instant claims 1-3 and 8 has been interpreted by the examiner to refer to the percent by volume based on the total volume of the colored particles and external additive particles present in the toner.

The recitation "percent by volume based on the colored particles" in instant claims 4, 5, and 8 has been interpreted by the examiner to refer to the percent by volume based on the total volume of the colored particles present in the toner.

The recitation "percent by volume based on the external additive particles" in instant claims 6-8 has been interpreted by the examiner to refer to the percent by volume based on the total volume of the external additive particles present in the toner.

If applicants do not agree with the examiner's definitions, they should clearly state so, and indicate where there is antecedent basis in the specification for their definitions.

Rejections based on the examiner's interpretations are set forth infra.

10. Claim 8 is objected to because of the following informalities:

The recitation "a volume average particle diameter of the toner is 4.0 - 8.0 μm and sum of the colored particles and the external additive particles of at most 2.5 μm is 0.1 - 10 percent by volume based on the sum of the colored particles and the external additive particles" in claim 8 is redundant. Claim 1, from which claim 8 depends, already recites the limitations repeated in claim 8.

Appropriate correction is required.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the

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United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f), or (g) prior art under 35 U.S.C. 103(a).

14. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European Patent 0,331,425 (EP'425).

EP'425 discloses the toner A comprising colored particles and externally added hydrophobic silica. The colored particles comprise a binder resin and as a colorant, magnetic powder.

Toner A has a volume average particle diameter of $7.8\ \mu\text{m}$, which is within the range of 4.0 to $8.0\ \mu\text{m}$ recited in instant claim 1. See example 1 at pages 11-14, and Table 2 at page 15, toner A. Prior to the addition of the external additive, the colored particles comprise an accumulation of 0.0% by volume of particles having a particle size of $3.17\ \mu\text{m}$ or less. See Table 1 at page 13. Because the EP'425 colored particles in example 1 have an accumulated 0.0% by volume of color particles having a particle size of $3.17\ \mu\text{m}$ or less, the EP'425 colored particles meet the limitation of comprising "9 percent or less by volume" of colored particles having particle diameter of at most $2.5\ \mu\text{m}$ based on the colored particles recited in instant claim 4. After the addition of the external additives to the colored particles, the resultant toner A comprises 10% by volume of particles having a particle size of $5\ \mu\text{m}$ or less. The value of 10% by volume was determined by dividing the percent by number of particles $\leq 5\ \mu\text{m}$ by the ratio of the percent by number to the percent by volume of particles $\leq 5\ \mu\text{m}$ reported in Table 3 for the toner in example 1 (i.e., $35/3.4$). See page 14, line 4. The EP'498 amount of 10% by volume of particles having a particle size of $\leq 5\ \mu\text{m}$ is within the numerical range of " 0.1 to 10% by volume of particles having a particle size of at most

2.5 μm based on the sum of colored particles and external additive particles" recited in instant claim 1.

EP'425 does not explicitly disclose that the amount of 10% by volume is the sum of color particles and external additive particles having particle size of $\leq 5 \mu\text{m}$. However, as discussed supra, the particle size distribution of the toner A appears to have been determined after the addition of the external additive particles. Thus, it is reasonable to conclude that the amount of 10% by volume is of the sum of color particles and the external additive particles having a particle size of $\leq 5 \mu\text{m}$ in the toner A of EP'425. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980)..

15. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 6,665,653 B2 (Mitsubishi).

Mitsubishi discloses a toner comprising colored particles and externally added hydrophobic silica. The colored particles comprise a binder resin and a colorant. The toner has a volume average particle diameter of 7.2 μm , which is within the range of 4.0 to 8.0 μm recited in instant claim 1. See example 1 at cols. 18-20. Mitsubishi discloses that after the addition of

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the hydrophobic silica to the colored particles, the resulting toner comprises 3.5% by volume of particles having a particle size of 5 μm or less. Col. 20, lines 49-50. The value of 3.5% by volume of particles having a particle size of $\leq 5 \mu\text{m}$ is within the numerical ranges of 0.1 to 10% and 0.3 to 8% by volume of particles having a particle size of at most 2.5 μm based on the sum of colored particles and external additive particles, recited in instant claims 1 and 2, respectively.

Mitsubishi does not explicitly disclose that the amount of 3.5% by volume is the sum of colored particles and external additive particles having particle size of $\leq 5 \mu\text{m}$. Nor does Mitsubishi disclose that its colored particles comprise 9% by volume or less of colored particles having a particle diameter of at most 2.5 μm as recited in instant claim 4. However, as discussed supra, Mitsubishi discloses that the toner, after the addition of the hydrophobic silica to the colored particles, has the disclosed particle distribution of 3.5% by volume of particles having a particle size of 5 μm or less. Furthermore, the value of 3.5% by volume of particles having a particle size of 5 μm or less is much lower than the value of 9% by volume or less of colored particles having a particle size of at most 2.5 μm recited in instant claim 4. Thus, it is reasonable to

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conclude that the amount of 3.5% by volume is of the sum of colored particles and the external additive particles having a particle size of $\leq 5 \mu\text{m}$ in the toner of example 1 of Mitsuhashi, and that the colored particles in the toner of Mitsuhashi comprise colored particles having a particle size of at most $2.5 \mu\text{m}$ in an amount of 9% by volume or less based on the colored particles as recited in instant claim 4. The burden is on applicants to prove otherwise. Fitzgerald, supra.

16. Claims 3 and 5-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach or suggest the toner recited in instant claims 3 and 5-8.

Neither EP'425 nor Mitsuhashi teaches or suggests a toner comprising external additive particles having a particle diameter of at most $2.5 \mu\text{m}$ that are present in the amount of 0.5 to 5 percent by volume based on the sum of the colored particles and the external additive particles as recited in instant claim 3. Nor is there enough evidence on the present record for a person having ordinary skill in the art to reasonably conclude that the toners taught in either EP'425 or

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Mitsubishi comprise such a percent by volume of external additive particles as recited in instant claim 3.

Neither EP'425 nor Mitsubishi teaches or suggests a toner comprising colored particles having a particle diameter of at most 2.5 μm that are present in the amount of 0.05 to 8 percent by volume based on the colored particles as recited in instant claim 5. Nor is there enough evidence on the present record for a person having ordinary skill in the art to reasonably conclude that the toners taught in either EP'425 or Mitsubishi comprise the percent by volume of colored particles recited in instant claim 5.

Neither EP'425 or Mitsubishi teaches or suggests a toner comprising external additive particles having a particle diameter of at most 2.5 μm that are present in the amount of 5 percent or less or 0.05 to 5 percent by volume based on the external additive particles, recited in instant claim 6 and claims 7 and 8, respectively. Nor is there enough evidence on the present record for a person having ordinary skill in the art to reasonably conclude that the toners taught in either EP'425 or Mitsubishi comprise the percent by volume of external additive particles recited in instant claims 6-8.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Nov. 24, 2004

Janis L. Dote
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PRIMARY EXAMINER
GROUP 1500
1700